

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***RESPONSE TO COMMENTS***

ON THE TITLE V RENEWAL DRAFT PERMIT V-05-074

Morehead State University  
305 Howell-McDowell Ad. Bldg  
Morehead, KY 40351

June 5, 2006

Timothy J Rust, Reviewer

SOURCE I.D. #: 021-205-00005

SOURCE A.I. #: 3873

ACTIVITY #: APE20050001

**SOURCE DESCRIPTION:**

Morehead State University has applied to the Division for Air Quality for the renewal of their Title V permit (V-99-052, Revision 1) for the operation of three steam boilers, coal & ash handling operations, coal storage and natural gas piping facilities. The existing emission sources include a 76 mmBtu/hr rated Spreader stoker coal-fired indirect-heat-exchanger with multicyclone and baghouse (emission unit 02); a 36.7 mmBtu/hr rated Underfeed stoker coal-fired indirect-heat-exchanger with multicyclone (emission unit 03); a 31 mmBtu/hr natural gas fired, Scotch Marine Fire tube steam boiler (emission unit 04); and insignificant activities (coal/ash handling and waste incinerator).

**PUBLIC AND U.S. EPA REVIEW:**

On April 28, 2006, the public notice on availability of the renewal draft permit and supporting material for comments by persons affected by the plant was published in *The Morehead News* in Morehead, Kentucky. The public comment period expired 30 days from the date of publication.

*Comment received*

Comments were received from Mr. Doug Doerrfeld on behalf of the Rowan County Chapter of Kentuckians for the Commonwealth on May 30, 2006. Attachment A to this document lists the comments received and the Division's response to each comment. No changes were made to the permit as a results of comments received. U.S. EPA has 45 days to comment on this proposed permit.

# ATTACHMENT A

## Response to comments.

Mr. Doug Doerrfeld on behalf of the Rowan County Chapter of Kentuckians for the Commonwealth

1. Applicant has stated facility is in a commercial area. This is not accurate. There is an apartment building and house within 200 feet of the facility. Other residences within 500 feet of the facility and a city park where children regularly recreate and play organized sports directly adjacent (across the creek) to the facility. It would be more accurate to characterize the area surrounding the source as residential.

*Division's response:*

*Comment acknowledged.*

2. The .27 lb/mmBtu 3 hour average and .84 lb/mmBtu 24 hour average limit on particulates from unit 4 are exceptionally high for a natural gas fired unit. There is no explanation for these limits. There are no other specific emission limits for this natural gas fired unit.

*Division's response:*

*The emission limits in the permit for unit 4 were established pursuant to 401 KAR 59:015, Sections 4 and 5, and has since not been changed. These limits were established in a prior permitting action therefore, no additional explanation was required in the Statement of Basis for this renewal permit that specified because there have not been any changes to the operation of the unit at the facility.*

3. Since there have been citizen complaints, an Enforcement Action and since there has been no boiler particulate emissions evaluation since 2003 on unit 2 and since 2002 on unit 3 and since unit 2 was at 100% and unit 3 near 100% of maximum allowable emissions, an emissions evaluation needs to be done in Dec. of 2006 on both unit 2 and unit 3 which, in addition to particulates and other HAPS includes mercury monitoring. In light of this history we recommend after September 13, 2007 in addition to all other Specific Monitoring Requirements that there be required annual emissions evaluations.

*Division's response:*

*The Division acknowledges that over the past five years, Morehead State has received numerous Notices of Violations (NOVs) for opacity and particulate exceedance in response to citizen complaints and the Division's inspections. The Division has pursued three Enforcement Actions, DAQ-02016, DAQ-03039, and DAQ-050184 as a result of these multiple NOVs and the failure to apply for a renewal permit when permit V-99-052 Revision 1 expired on March 1, 2005. In all cases, Morehead State has complied with the Agreed Orders initiated by those actions including, but not limited to, upgrades to control devices, installation of boiler operation monitors, additional stack testing, and most recently the hiring of a full time professional to administer their environmental programs. Additionally over this time period, Morehead State replaced their oldest*

*coal fired boiler with a new natural gas fired boiler. The Division considered this compliance history when writing the renewal permit and included two significant revisions to draft permit # V-05-074, resulting in changes to testing, monitoring, recordkeeping, and reporting requirements from the previous V-99-052 Revision1 permit.*

*First, Section B 3 (a), Testing Requirements for both coal-fired units 2 and 3 now requires at least three performance tests for particulates which are to be conducted in years 1, 3, and 5 after the issuance of the final permit. The previous permit only required one test during its life. Given that these units operate mostly from late fall thru early spring, the first tests may be expected to be conducted within a month or two of December 2006. Also, Section B 3 (d) and (e) requires, performance tests be conducted within 6 months of that date and annually thereafter after September 13, 2007 [40 CFR 63 subpart DDDDD]. The applicability of 40 CFR 63 subpart DDDDD requirements, however, will ultimately depend on the final compliance strategy that Morehead State submits to the Division and approved by the US EPA. Regardless of the nature of this strategy, testing requirements will not be less stringent than what is stated in Sec. B 3 (a).*

*Second, Compliance Assurance Monitoring (CAM) 40CFR 64 for particulate matter applies to both coal units 2 and 3. Morehead State is required by this regulation to develop a plan to monitor specific operational parameters that will assure compliance with emission standards dependent on control devices to meet limitations. The plan is outlined under Specific Monitoring Requirements that lists indicator ranges for each operational parameter and frequency of data collection. The plan requires periodic monitoring of these parameters, in some cases hourly, and take corrective action when data falls outside indicator ranges. Additionally, excursions outside the indicator ranges are required to be reported to the Division and if the number of excursions exceeds a threshold amount during a calendar quarter, Morehead State must develop a Quality Improvement Plan (QIP). The QIP may include additional stack testing. In a practical sense, implementation of the CAM will assure that the problems most often cited by Morehead State as causing the majority of the NOV's will be identified and corrected before an emission standard is exceeded. It will also provide the Division with quantifiable data on a regular basis to assist with compliance inspections.*

*Finally, the Division does not have a regulatory basis or a justifiable cause for requiring Morehead State to conduct monitoring or testing for mercury beyond any future requirements for HAPS that may become applicable pursuant to 40 CFR 63 Subpart DDDDD depending upon their approved compliance strategy.*

4. Under Specific Control Equipment Operation Conditions. The imprecise language for the multicyclone and baghouse operation makes difficult a compliance determination by the inspector, and should be replaced with specific enforceable conditions in the permit that state the manufacturer's recommendations so that compliance with those recommendations can be readily ascertained and is not subject to later dispute.

*Division's response:*

*The CAM indicator ranges referred to in response 3 above were developed from manufacturers specifications, actual operating conditions, and good engineering judgment. This will provide the Division's inspectors with an ongoing quantifiable set of data from which to make quick decisions regarding compliance status and emission control operation. The difficulty with making manufacturers recommendations specific enforceable conditions is that the information typically*

*supplied with equipment is written for a model series and imprecise to the specific application or too voluminous to be of practical use within the context of a written permit. Ultimately, certain operating parameters will change as the equipment ages and thus differ slightly from specific listed design data. Also, standard operating procedures and good engineering practice could be developed by the source through their own experience that will not affect emissions, though they may differ slightly from published manufacturers specifications. The language in the permit, as written, sets up an operational expectation for the source and provides a resource that inspectors can fall back on in the event that further research is needed to enforce permitted emission limitations.*

5. There has been no past monitoring of mercury emissions at this facility. The facility has had a large amount of emissions over a very long period of time considering its location very near residences and a park we request that mercury testing be done at these residences, the Morehead City Park and the sediments and fish of the Middle Fork of Triplet Creek near the facility which is stocked by Kentucky Fish and Wildlife with rainbow trout which along with other species are consumed by area residents. We are pleased to see that on September 13, 2007 stricter limitation on emissions will be required. This is long overdue. However, if mercury testing determines high levels of contamination, additional mercury emission requirements need to be required.

*Division's response:*

*Morehead State is not a major source of mercury emissions and given that being considered is a renewal permitting action, the Division does not have a regulatory basis or cause for requiring Morehead State to conduct monitoring or testing for mercury beyond any future requirements for HAPS that may become applicable pursuant to 40 CFR 63 subpart DDDDD on September 13, 2007.*

*The Division acknowledges that the Kentucky Departments for Environmental Protection, Health Services and Fish and Wildlife have issued a joint fish consumption advisory to the public. This advisory states in part that, "All waters are under advisory for mercury. Women of childbearing age and children 6 years of age or younger should eat no more than one meal per week of freshwater fish. Adult men and other women are not included in the consumption notice. This is not an emergency as organic mercury can occur naturally in the environment and does not affect swimmers, skiers or boaters." More information can be found at [www.fw.ky.gov](http://www.fw.ky.gov). Mercury pollution has become a widely researched issue that has shown to extend from natural to local to regional to interstate multi-media sources. Even if localized testing were conducted for mercury contamination by independent research, pinpointing the findings, if any, to a single source would be problematic, particularly given the many potential mercury sources in and around the Morehead community.*

6. We are concerned that there is no application for new control technology proposed in this draft permit that would allow this facility to reach the MACT limits that will be required after September 13, 2007.

*Division's response:*

*Comment acknowledged. The Division received the renewal application approximately two years before the effective date for 40 CFR 63 subpart DDDDD and less than ten months after the last final rule was published, so is not required at this time to choose a final compliance option. The Division decided that since their original Title V permit expired on March 1, 2005 and Morehead State was operating under an agreed order, it was in everyone's best interest, including the public, to issue a*

*renewal permit that would add the changes listed above in response 3 and include Maximum Achievable Control Technology (MACT) Standards that will apply to their existing equipment beginning September 13, 2007. This would afford Morehead State the opportunity to develop a thorough compliance strategy, and then submit an application to revise this permit if they choose accept limits or install additional controls to preclude the applicability of the regulation. Otherwise, the final renewal permit with the MACT language will become enforceable as of the effective date, which will allow the Division and U.S. EPA to take enforcement actions for non-compliance. New control technology is not necessarily required by 40 CFR 63 subpart DDDDD.*

*Morehead State therefore has some degree of flexibility to come into compliance, through three options. First, they can install or upgrade control equipment to achieve compliance with the emission standards applicable to their units. Second, they could use fuel analysis to show compliance on a continuous basis. These are quite clearly specified in the regulations, including methods to accomplish this, including sanction for falling out of compliance; and would be rolled in to the revised permit. Third, they could preclude themselves altogether from any applicability by 40 CFR 63 subpart DDDDD. To do this, they must voluntarily reduce their source-wide total and single HAPS emissions to below Major Source Threshold levels, demonstrate this through stack testing, and take limits as federally enforceable caps that if exceeded would be considered a violation of the MACT Regulation. The permit would be revised to include the federally enforceable caps regardless of how they choose to accomplish their HAPS reductions for preclusion and their strategy must undergo public review and be approved by the US EPA before being implemented.*

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.